REMARKS

The above is believed to be self-explanatory.

Respectfully submitted,

Reg. #32,004

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JJB/njr
K:\Sch\1722\preliminary amendment 2.wpd

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend the claims as follows:

1. A galenical formulation , ~~characterized in that is contains~~ comprising paramagnetic and diamagnetic perfluoroalkyl-containing substances.

2. A formulation ~~Formulation~~ according to claim 1, wherein the ratio of paramagnetic to the diamagnetic perfluoroalkyl-containing substances lies between 5:95 and 95:5.

3. A formulation ~~Formulation~~ according to claim 1, wherein the paramagnetic and diamagnetic perfluoroalkyl-containing compounds are present dissolved in an aqueous solvent.

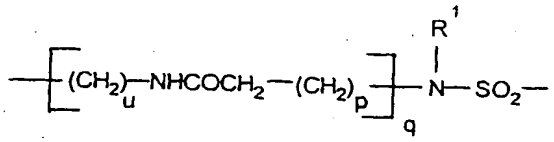
4. A formulation ~~Formulation~~ according to claim 1, wherein the paramagnetic perfluoroalkyl-containing compounds are those of general formula I:

$$R^F\text{-}A \qquad \text{I}$$

in which R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes.

5. A formulation ~~Formulation~~ according to claim 4, wherein molecule portion A stands for a group L-M, whereby L stands for a linker and M stands for a metal complex that consists of an open-chain or cyclic chelating agent, which as a central atom contains an atom of atomic numbers 21-29, 39, 42, 44 or 57-83.

6. A formulation ~~Formulation~~ according to claim 5, wherein linker L is a direct bond, a methylene group, an -NHCO group, a group



whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1-CO_2$ group, 1 to 2 CO groups, a group

$$-CO-\underset{\displaystyle R^1}{\overset{\displaystyle |}{N}}-T-N(R^1)-SO_2-R^F \qquad \text{or 1 to 2}$$

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$,

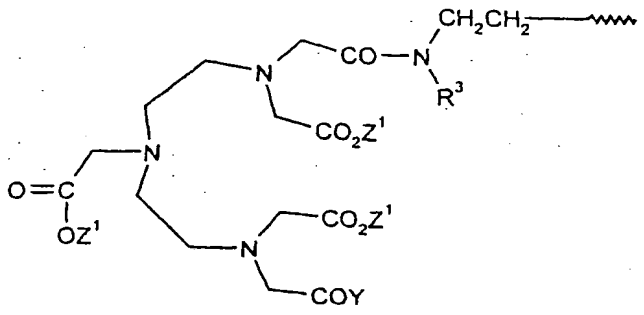
whereby

R^1, and p and q have the above-indicated meanings,

and R^F ~~is defined as in claim 4~~ represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms

T means a C_2-C_{10} chain, which optionally is interrupted by 1 to 2 oxygen atoms or 1 to 2 -NHCO groups.

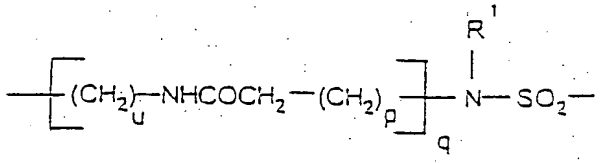
7. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a complex of general formula II



(II)

in which R^3, Z^1 and Y are independent of one another, and

R^3 has the meaning of R^1 or $-(CH_2)_m$-L-R^F, whereby m is 0, 1 or 2, and L ~~and R^f have the meaning that is mentioned in claim 6,~~ is a direct bond, a methylene group, an -NHCO group, a group



whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2$-OH group, a $-CH_2$-CO_2H group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1$-CO_2 group, 1 to 2 CO groups, a group

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 -OR^1 groups, 1 to 2 oxo groups, 1 to 2 -NH-COR^1 groups, 1 to 2 -$CONHR^1$ groups, 1 to 2 (-CH_2)$_p$-CO_2H groups, 1 to 2 groups -$(CH_2)_p$-$(O)_q$-CH_2CH_2-R^F,

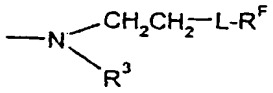
whereby

R^1, and p and q have the above-indicated meanings,

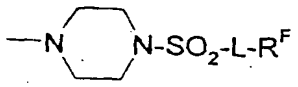
and R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes,

Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

Y means -OZ^1 or



or

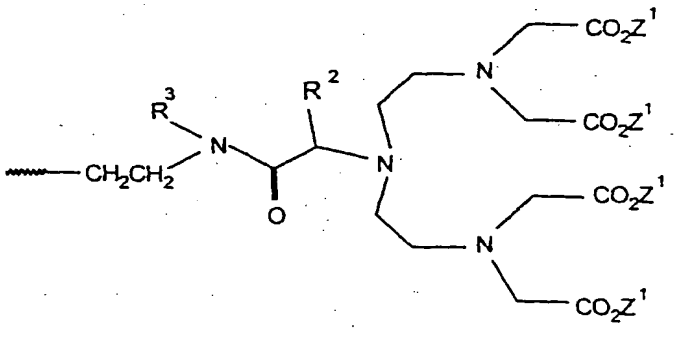


whereby Z^1 and R^3 have the above-mentioned meanings.~~, and~~

~~linker L is defined as in claim 6~~

~~and R^F is defined as in claim 4.~~

8.A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a complex of general formula III

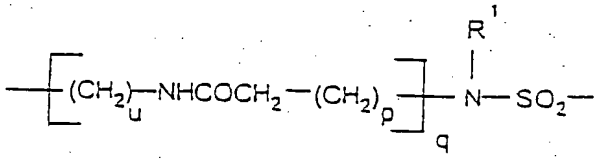


(III)

in which ~~R^3 and Z^+ have the meanings that are mentioned in claim 7~~

R^3 and Z^1 are independent of one another, and

R^3 has the meaning of R^1 or $-(CH_2)_m$-L-R^F, whereby m is 0, 1 or 2, and L is a direct bond, a methylene group, an -NHCO group, a group

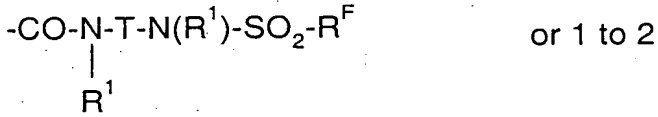


whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2$-OH group, a $-CH_2$-CO_2H group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1$-CO_2 group, 1 to 2 CO groups, a group



optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p$-CO_2H groups, 1 to 2 groups $-(CH_2)_p$-$(O)_q$-CH_2CH_2-R^F,

whereby

R^1, and p and q have the above-indicated meanings,

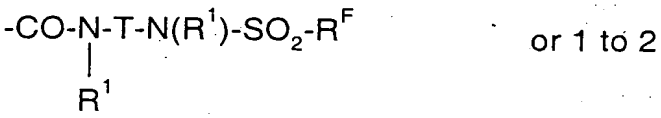
and R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes,

Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

and R^2

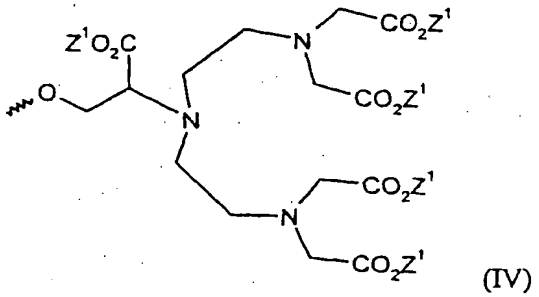
~~has the meaning of R1 in claim 6~~ means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1-CO_2$ group, 1 to 2 CO groups, a group



optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$.

9. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a metal complex of general formula IV

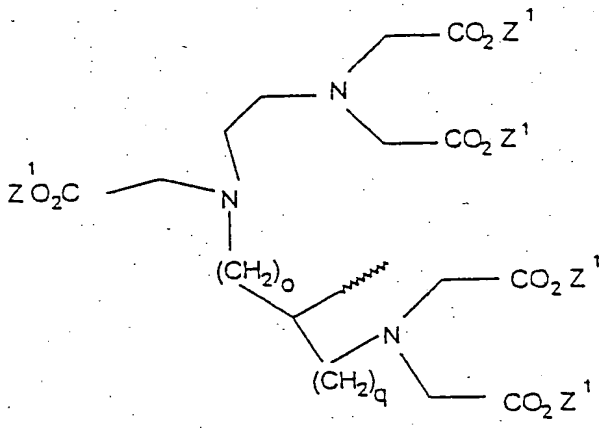


(IV)

in which Z^1 ~~has the meaning that is mentioned in claim 7.~~

independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83.

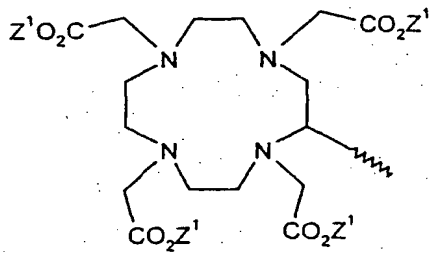
10. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a metal complex of general formula V



(V)

in which Z^1 ~~has the meaning that is mentioned in claim 7,~~
independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,
and o and q stand for numbers 0 or 1, and yields the sum o + q = 1.

11. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a metal complex of general formula VI

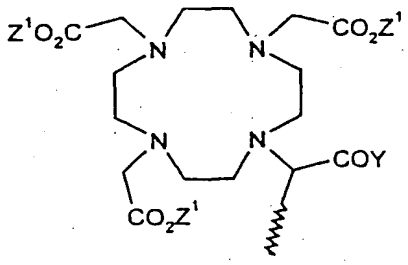


(VI)

in which Z^1 ~~has the meaning that is mentioned in claim 7~~

independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,.

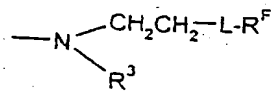
12. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a metal complex of general formula VII



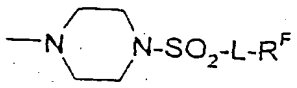
(VII)

in which Z^1 ~~and Y have the meanings that are mentioned in claim 7.~~ independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

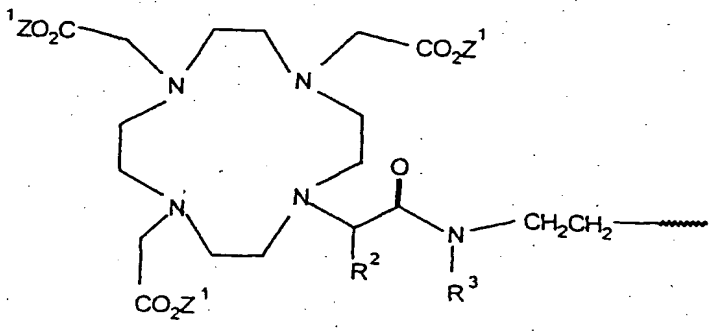
and Y means $-OZ^1$ or



or



13. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula VIII



(VIII)

in which ~~R^3 and Z^+ have the meanings that are mentioned in claim 7,~~

R^3 has the meaning of R^1 or $-(CH_2)_m$-L-R^F, whereby m is 0, 1 or 2, and L is a direct bond, a methylene group, an -NHCO group, a group

$$-CO-\underset{\underset{R^1}{|}}{N}-T-N(R^1)-SO_2-R^F \qquad \text{or 1 to 2}$$

whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2$-OH group, a $-CH_2$-CO_2H group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1$-CO_2 group, 1 to 2 CO groups, a group

$$-CO-\underset{\underset{R^1}{|}}{N}-T-N(R^1)-SO_2-R^F \qquad \text{or 1 to 2}$$

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p$-CO_2H groups, 1 to 2 groups $-(CH_2)_p$-$(O)_q$-CH_2CH_2-R^F,

whereby

R^1, and p and q have the above-indicated meanings,

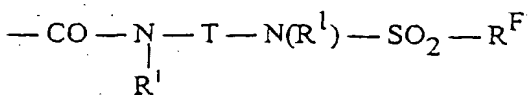
and R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes, and

Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

and R^2

~~has the meaning of R1 in claim 6~~

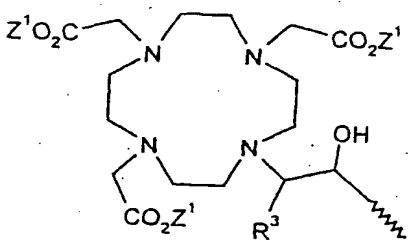
-means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups, or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1-CO_2$ group, 1 to 2 CO groups, a group



or 1 to 2

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$.

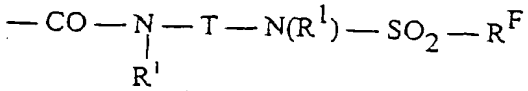
14. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula IX



(IX)

in which ~~R^3 and Z^1 have the meanings that are mentioned in claim 7.~~

R^3 has the meaning of R^1 or $-(CH_2)_m-L-R^F$, whereby m is 0, 1 or 2, and L is a direct bond, a methylene group, an -NHCO group, a group



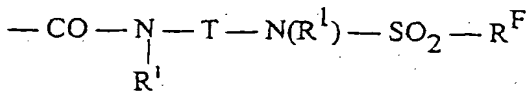
or 1 to 2

whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1-CO_2$ group, 1 to 2 CO groups, a group



or 1 to 2

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$,

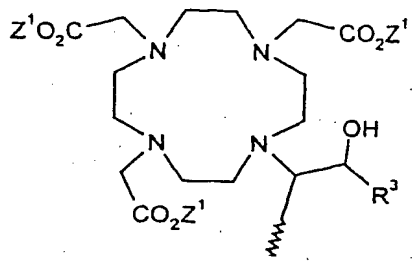
whereby

R^1, and p and q have the above-indicated meanings,

and R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes, and

Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

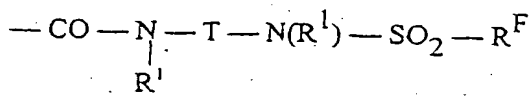
15. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula X



(X)

in which ~~R^3 and Z^1 have the meanings that are mentioned in claim 7.~~

R^3 has the meaning of R^1 or $-(CH_2)_m$-L-R^F, whereby m is 0, 1 or 2, and L is a direct bond, a methylene group, an -NHCO group, a group

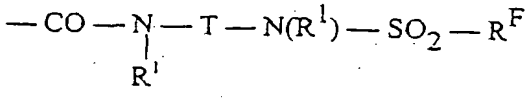


or 1 to 2

whereby p means the numbers 0 to 10, q and u, independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2$-OH group, a $-CH_2$-CO_2H group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1$-CO_2 group, 1 to 2 CO groups, a group



or 1 to 2

optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 -OR^1 groups, 1 to 2 oxo groups, 1 to 2 -NH-COR^1 groups, 1 to 2 -$CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$,

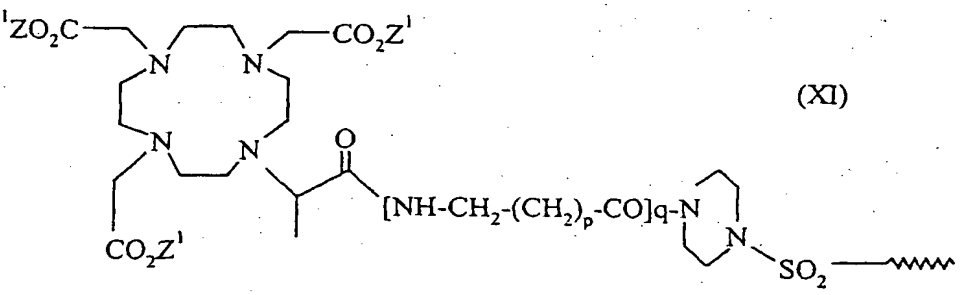
whereby

R^1, and p and q have the above-indicated meanings,

and R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes, and

Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83.

16. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula XI



(XI)

in which ~~Z^+, p and q have the meaning that is mentioned in claim 7,~~

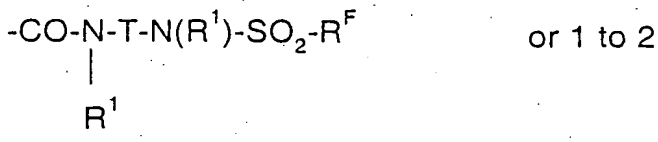
Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83,

and whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and ~~R^2 has the meaning of R^+ in claim 6.~~

R^2 means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

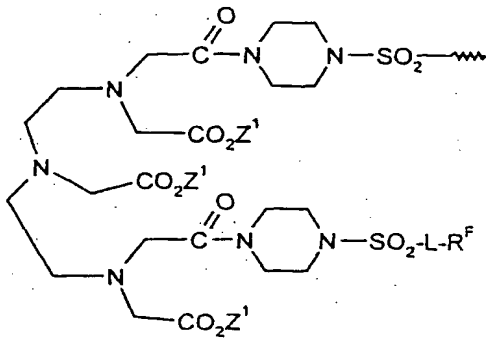
or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 -NR^1 groups, 1 to 2 sulfur atoms, a piperazine, a -$CONR^1$ group, an -NR^1CO group, an -SO_2 group, an -NR^1-CO_2 group, 1 to 2 CO groups, a group



or 1 to 2

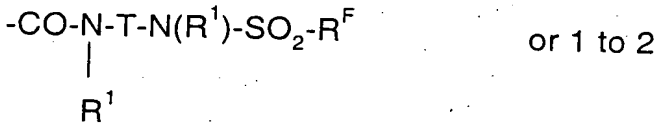
optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 -OR^1 groups, 1 to 2 oxo groups, 1 to 2 -NH-COR^1 groups, 1 to 2 -$CONHR^1$ groups, 1 to 2 (-CH_2)$_p$-CO_2H groups, 1 to 2 groups -(CH_2)$_p$-(O)$_q$-CH_2CH_2-R^F.

17. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula XII



(XII)

in which L ~~is defined as in claim 6~~ is a direct bond, a methylene group, an -NHCO group, a group



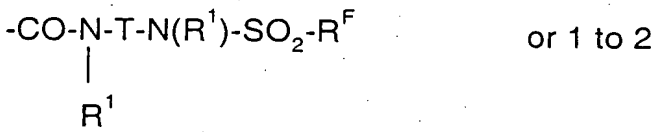
or 1 to 2

whereby p means the numbers 0 to 10, q and u,

independently of one another, mean the numbers 0 or 1, and

R^1 means a hydrogen atom, a methyl group, a $-CH_2-OH$ group, a $-CH_2-CO_2H$ group or a C_2-C_{15} chain, which optionally is interrupted by 1 to 3 oxygen atoms, 1 to 2 >CO groups or an optionally substituted aryl group and/or is substituted with 1 to 4 hydroxyl groups, 1 to 2 C_1-C_4 alkoxy groups, 1 to 2 carboxy groups,

or a straight-chain, branched, saturated or unsaturated C_2-C_{30} carbon chain, which optionally contains 1 to 10 oxygen atoms, 1 to 3 $-NR^1$ groups, 1 to 2 sulfur atoms, a piperazine, a $-CONR^1$ group, an $-NR^1CO$ group, an $-SO_2$ group, an $-NR^1-CO_2$ group, 1 to 2 CO groups, a group



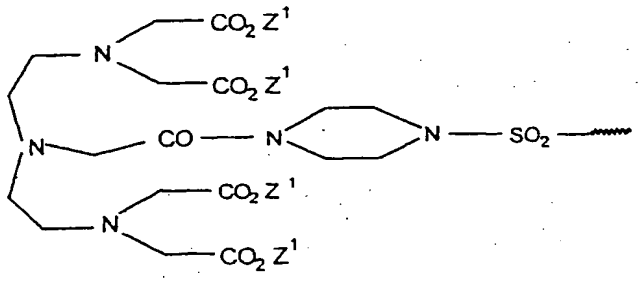
optionally substituted aryls and/or is interrupted by these groups and/or is optionally substituted with 1 to 3 $-OR^1$ groups, 1 to 2 oxo groups, 1 to 2 $-NH-COR^1$ groups, 1 to 2 $-CONHR^1$ groups, 1 to 2 $(-CH_2)_p-CO_2H$ groups, 1 to 2 groups $-(CH_2)_p-(O)_q-CH_2CH_2-R^F$,

whereby

R^1, and p and q have the above-indicated meanings,

R^F ~~is defined as in claim 4~~ represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and A is a molecule portion that contains 1-6 metal complexes, and Z^1 ~~is defined as in claim 7~~ Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83.

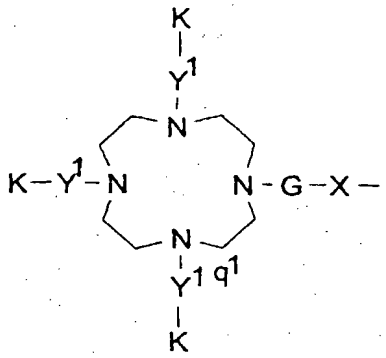
18. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M is a complex of general formula XIII



(XIII)

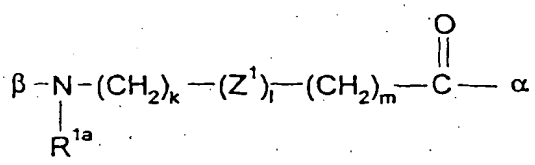
in which ~~Z^1 has the meaning that is mentioned in claim 7~~ Z^1, independently of one another, mean a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 39, 42, 44 or 57-83.

19. A formulation ~~Formulation~~ according to claim 4, wherein molecule portion A has the following structure:

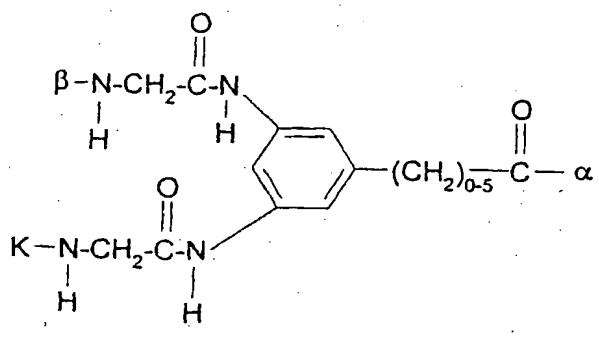


whereby

- q^1 is a number 0, 1, 2 or 3,
- K stands for a complexing agent or metal complex or salts thereof of organic and/or inorganic bases or amino acids or amino acid amides,
- X is a direct bond for the perfluoroalkyl group, a phenylene group or a C_1-C_{10} alkyl chain, which optionally contains 1-15 oxygen atoms, 1-5 sulfur atoms, 1-10 carbonyl groups, 1-10 (NR) groups, 1-2 $NRSO_2$ groups, 1-10 CONR groups, 1 piperidine group, 1-3 SO_2 groups, 1-2 phenylene groups or optionally is substituted by 1-3 radicals R^F, in which R stands for a hydrogen atom, a phenyl, benzyl or a C_1-C_{15} alkyl group, which optionally contains 1-2 NHCO groups, 1-2 CO groups, 1-5 oxygen atoms and optionally is substituted by 1-5 hydroxy, 1-5 methoxy, 1-3 carboxy, 1-3 R^F radicals,
- Y is a direct bond or a chain of general formula II′ or III′:



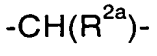
(II′)



(III[1])

in which

- R^{1a} is a hydrogen atom, a phenyl group, a benzyl group or a C_1-C_7 alkyl group, which optionally is substituted with a carboxy group, a methoxy group or a hydroxy group,
- Z^1 is a direct bond, a polyglycol ether group with up to 5 glycol units or a molecule portion of general formula IV^1



(IV[1])

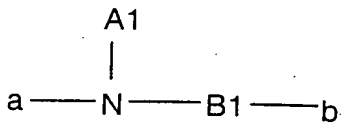
in which R^{2a} is a C_1-C_7 carboxylic acid, a phenyl group, a benzyl group or a $-(CH_2)_{1-5}$-NH-K group,

- α represents the binding to the nitrogen atom of the skeleton chain, β represents the binding to the complexing agent or metal complex K,
- and in which variables k and m stand for natural numbers between 0 and 10, and l stands for 0 or 1,

and whereby

- G is a CO or SO_2 group.

20. A formulation ~~Formulation~~ according to claim 5, in which linker L stands for a molecule portion according to general formula XIV



(XIV),

in which

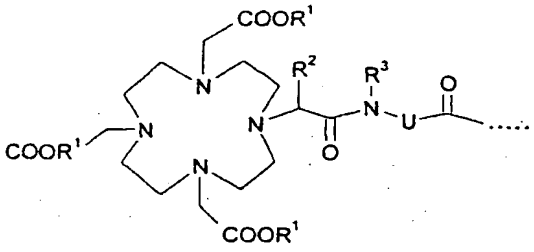
N represents a nitrogen atom,

A1 means a hydrogen atom, a straight-chain or branched C_1-C_{30} alkyl group, which optionally is interrupted by 1-15 oxygen atoms and/or optionally is substituted with 1-10 hydroxy groups, 1-2 COOH groups, a phenyl group, a benzyl group and/or 1-5 -OR^4 groups, with R^4 in the meaning of a hydrogen atom or a C_1-C_7 alkyl radical, or B1-R^F,

B1 means a straight-chain or branched C_1-C_{30} alkylene group that optionally is interrupted by 1-10 oxygen atoms, 1-5 -NH-CO groups, 1-5 -CO-NH groups, by a phenylene group (that is optionally substituted by a COOH group), 1-3 sulfur atoms, 1-2 -N(B2)-SO_2 groups, and/or 1-2 -SO_2-N(B2) groups with B2 in the meaning of A1, an NHCO group, a CONH group, an N(B2)-SO_2 group, or an -SO_2-N(B2) group and/or optionally is substituted with radical R^F a straight or branched perfluoroalkyl radical with 4 to 30 carbon atoms,

and in which a represents the binding to metal complex M, and b represents the binding to ~~perfluoroalkyl group R^F.~~ a straight or branched perfluoroalkyl radical with 4 to 30 carbon atoms.

21. A formulation ~~Formulation~~ according to claim 5, wherein metal complex M stands for a metal complex of general formula XV

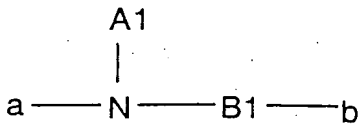


(XV)

whereby R^1 stands for a hydrogen atom or a metal ion equivalent of atomic numbers 21-29, 31, 32, 37-39, 42-44, 49 or 57-83,

R^2 and R^3 stand for a hydrogen atom, a C_1-C_7 alkyl group, a benzyl group, a phenyl group, $-CH_2OH$ or $-CH_2-OCH_3$,

U stands for radical L ~~according to claim 19~~, in which radical L stands for a molecule portion according to general formula XIV



(XIV),

in which

N represents a nitrogen atom,

A1 means a hydrogen atom, a straight-chain or branched C_1-C_{30} alkyl group, which optionally is interrupted by 1-15 oxygen atoms and/or optionally is substituted with 1-10 hydroxy groups, 1-2 COOH groups, a phenyl group, a benzyl group and/or 1-5 $-OR^4$ groups, with R^4 in the meaning of a hydrogen atom or a C_1-C_7 alkyl radical, or B1-R^F,

B1 means a straight-chain or branched C_1-C_{30} alkylene group that optionally is interrupted by 1-10 oxygen atoms, 1-5 -NH-CO groups, 1-5 -CO-NH groups, by a phenylene group (that is optionally

substituted by a COOH group), 1-3 sulfur atoms, 1-2 -N(B2)-SO_2 groups, and/or 1-2 -SO_2-N(B2) groups with B2 in the meaning of A1, an NHCO group, a CONH group, an N(B2)-SO_2 group, or an -SO_2-N(B2) group and/or optionally is substituted with radical R^F a straight or branched perfluoroalkyl radical with 4 to 30 carbon atoms,

and in which a represents the binding to metal complex M, and b represents the binding to a straight or branched perfluoroalkyl radical with 4 to 30 carbon atoms.

whereby L and U, independently of one another, can be the same or different, however.

22. A formulation ~~Formulation~~ according to ~~one of the preceding claims~~ claim 1, wherein the central atom of the metal complex is a gadolinium atom (atomic number 64).

23. A formulation ~~Formulation~~ according to claim 1, wherein the diamagnetic, perfluoroalkyl-containing substances are those of general formula XVI:

$$R^F\text{-}L^1\text{-}B^2 \qquad \text{(XVI)}$$

in which R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, L stands for a linker, and B^2 stands for a hydrophilic group.

24. A formulation ~~Formulation~~ according to claim 23, wherein linker L^1 is a direct bond, an -SO_2 group or a straight-chain or branched carbon chain with up to 20 carbon atoms, which can be substituted with one or more -OH, -COO^-, -SO_3^- groups and/or optionally contains one or more -O-, -S-, -CO-, -CONH-, -NHCO-, -CONR-, -NRCO-, -SO_2-, -PO_4^--, -NH, -NR groups, an aryl ring or a piperazine, whereby R stands for a C_1 to C_{20} alkyl radical, which in turn can contain one or more O atoms and/or can be substituted with -COO^- or SO_3 groups.

25. A formulation ~~Formulation~~ according to claim 23, wherein the hydrophilic group is a monosaccharide or a disaccharide, one or more adjacent -COO^- or -SO_3 groups, a dicarboxylic acid, an isophthalic acid, a picolinic acid, a benzenesulfonic acid, a

tetrahydropyrandicarboxylic acid, a 2,6-pyridinecarboxylic acid, a quaternary ammonium ion, an aminopolycarboxylic acid, an aminodipolyethyleneglycosulfonic acid, an aminopolyethylene glycol group, an SO_2-$(CH_2)_2$-OH group, a polyhydroxyalkyl chain with at least two hydroxyl groups or one or more polyethylene glycol chains with at least two glycol units, whereby the polyethylene glycol chains are terminated by an -OH or -OCH_3 group.

26. A formulation ~~Formulation~~ according to claim 1, wherein the diamagnetic perfluoroalkyl-containing substances are conjugates that consist of α-, β-, or γ-cyclodextrin and compounds of general formula XVIII:

$$A^1\text{-}L^3\text{-}R^F \qquad \text{(XVIII)}$$

in which A^1 stands for an adamantane, biphenyl or anthracene molecule, L^3 stands for a linker and R^F stands for a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms; and whereby linker L^3 is a straight-chain hydrocarbon chain with 1 to 20 carbon atoms, which can be interrupted by one or more oxygen atoms, one or more CO-, SO_2-, CONH-, NHCO-, CONR-, NRCO-, NH-, NR groups or a piperazine, whereby R is a C_1-C_5 alkyl radical.

27. A formulation ~~Formulation~~ according to claim 1, wherein the perfluoroalkyl chains of the perfluoroalkyl-containing metal complex and the other perfluoroalkyl-containing compounds contain 6 to 12 carbon atoms.

28. A formulation ~~Formulation~~ according to claim 1 ~~28~~, wherein the perfluoroalkyl chains contain 8 carbon atoms in each case.

29. A formulation ~~Formulation~~ according to claim 1, wherein it has a metal concentration of 50 to 250 mmol/1.

30. A substance ~~Substances~~ of general formula XVII

$$R^F\text{-}X^1 \qquad \text{(XVII)}$$

in which R^F represents a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and X^1 is a radical that is selected from the group of the following radicals (in this case, n is a number between 1 and 10):

31. A conjugate ~~Conjugates~~ that consist of α-, β-, or γ-cyclodextrin and compounds of general formula XVIII

$$A^1\text{-}L^3\text{-}R^F \qquad \text{(XVIII)}$$

in which A^1 stands for an adamantane, biphenyl or anthracene molecule, L^3 stands for a linker and R^F stands for a straight-chain or branched perfluoroalkyl radical with 4 to 30 carbon atoms, and whereby linker L^3 is a straight-chain hydrocarbon chain with 1 to 20 carbon atoms, which can be interrupted by one or more oxygen atoms, one or more CO-, SO_2-, CONH-, NHCO-, CONR-, NRCO-, NH-, NR groups or a piperazine, whereby R is a C_1-C_5 alkyl radical.

32. A process ~~Process~~ for the production of galenical formulations according to claim 1, wherein the paramagnetic and diamagnetic perfluoroalkyl-containing compounds are dissolved in a solvent while being stirred vigorously.

33. A process ~~Process~~ for the production of galenical formulations according to claim 1, wherein the paramagnetic and diamagnetic perfluoroalkyl-containing compounds are dissolved in a solvent while being treated simultaneously with ultrasound.

34. A process ~~Process~~ for the production of galenical formulations according to claim 1, wherein the paramagnetic and diamagnetic perfluoroalkyl-containing compounds are dissolved in a solvent while being treated simultaneously with microwaves.

35. A process ~~Process~~ for the production of galenical formulations according to claim 1, wherein the paramagnetic and diamagnetic perfluoroalkyl-containing compounds are dissolved in two different solvents, both solutions are added together, and one of the two solvents is distilled off.

36. A solid ~~Solid~~ formulation according to claim 1, wherein it is produced by freeze-drying a solution, which contains paramagnetic and diamagnetic perfluoroalkyl-containing substances.

37. ~~Use of galenical formulations according to claim 1 for the production of contrast~~ Contrast media for nuclear spin tomography comprising galenical formulations according to claim 1.

38. ~~Use of galenical formulations according to claim 1 for the production of contrast~~ Contrast media for visualizing lymph nodes or a blood-pool comprising galenical formulations according to claim 1.